Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_

Mr. Carr Foundations of Algebra

Mean, Median, and Mode: Notes

*Example 1:*

***Mean:***

The mean is found by taking the sum of the data, and then dividing the sum by the total number of values in the set. A mean is commonly referred to as an average.





Jerry has been working at a pizza shop to save up for a new phone. In the past week, he has earned the following amount of money each day $50, $35, $20, $25, $30, $35, $45. Find the mean for how much he made per day on average.



The mean is useful for predicting future results when there are no extreme values in the data set. However, the impact of extreme values on the mean may be important and should be considered.



*Example 2:*

***Median:***

The median of a set of data values is the middle value of the data set when it has been arranged in ascending order. That is, from the smallest value to the highest value.



Each year the Jacksons each plant one sunflower seed. When the sunflowers reach their full growth, they are measured and whoever has the tallest sunflower wins a prize. This year Gina won, with a sunflower that was 72 inches tall. The rest of the family’s sunflowers were 45 inches, 36 inches, 42 inches, and 46 inches. Find the median to determine what the typical sized sunflower the Jacksons grew was.

36, 42, 45, 46, 72.

The typical sunflower was 45 inches.

The median may be more useful than the mean when there are extreme values in the data set as it is not affected by the extreme values.



Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_

Mr. Carr Foundations of Algebra

Mean, Median, and Mode: Notes

*Example 3:*

***Mode:***

The mode of a set of data is the value in the set that occurs most often.



For Girl Scouts, each scout had to sell candy bars. Listed below are how many bars were sold by each girl. Using mode, find how many candy bars were generally sold by each girl.

Lisa- 30, Ruby- 10, Mel- 18, Aubree- 25,

Tina- 25, Rose- 17, Beth- 25, Janis- 11,

Margaret- 25

Each girl sold around 25 candy bars.

The mode is useful when the most common item, characteristic or value of a data set is required.



***Range:***

The difference between the highest and lowest numbers.

ONLINE ACTIVITIES:

<http://www.learnalberta.ca/content/mejhm/index.html?l=0&ID1=AB.MATH.JR.STAT&ID2=AB.MATH.JR.STAT.CENT&lesson=html/object_interactives/central_tendency/use_it.htm>

<http://www.quia.com/rr/51667.html>

*Example 4:*

Mrs. Keating’s classes decided to do a book drive for a local organization. Each one of her classes brought in books on a Monday. Her five classes brought in the following: 13 books, 25 books, 50 books, 10 books, and 22 books. Find the range for this set of data.

50 – 13 = 37 books. The range of this data is 37 books

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_

Mr. Carr Foundations of Algebra

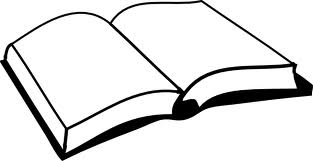
Practice Worksheet #1

Directions: Complete the following problems below. Show all of your work and circle your final answer. Round to the nearest whole number if necessary. Calculators may be used.

1. James is a huge Philadelphia Phillies fan. He goes to every home game to watch the team play. Of the games he went to they had the following amount of runs: 20, 15, 19, 9, 21, and 11. Find the median to see on average how many runs the team makes at their home games.



1. Every week night, Julia reads her biology textbook to study for AP Biology class. On Monday she read 25 pages. For the rest of the week she reads 30, 78, 20, and 34 pages. Find the median to figure out how many pages Julia usually reads each night.



1. Todd runs each day before going to work. In a week, he runs the following amount of miles starting on Sunday: 3, 5, 4, 5, 4, 5, 6. Find the mode, to see how many miles Todd usually runs.



1. Find the range for each set of data for #1-3.

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_

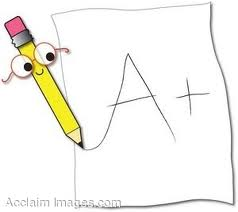
Mr. Carr Foundations of Algebra

Practice Worksheet #2

Directions: Complete the following problems below. Show all of your work and circle your final answer. Round to the nearest whole number if necessary. Calculators may be used.

1. A list of five test scores were 60, 67, 73, 63 and 67. Find the following:

a) Mean



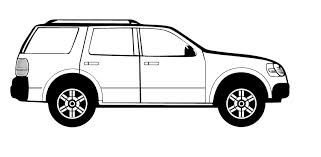
b) Median

c) Mode

d) Range

2. Seven people were asked how many miles they lived from work. The responses were 15, 7, 14, 21, 5, 7 and 13. Find the following:

a) Mean



b) Median

c) Mode

d) Range

BONUS PROBLEM:

3. A sample of eight students were randomly selected and asked, "How many times did you check your email yesterday?" The numbers were: 3, 0, 8, 8, 10, 2, 6, 12.Find the following:

a) Mean



b) Median

c) Mode

d) Range